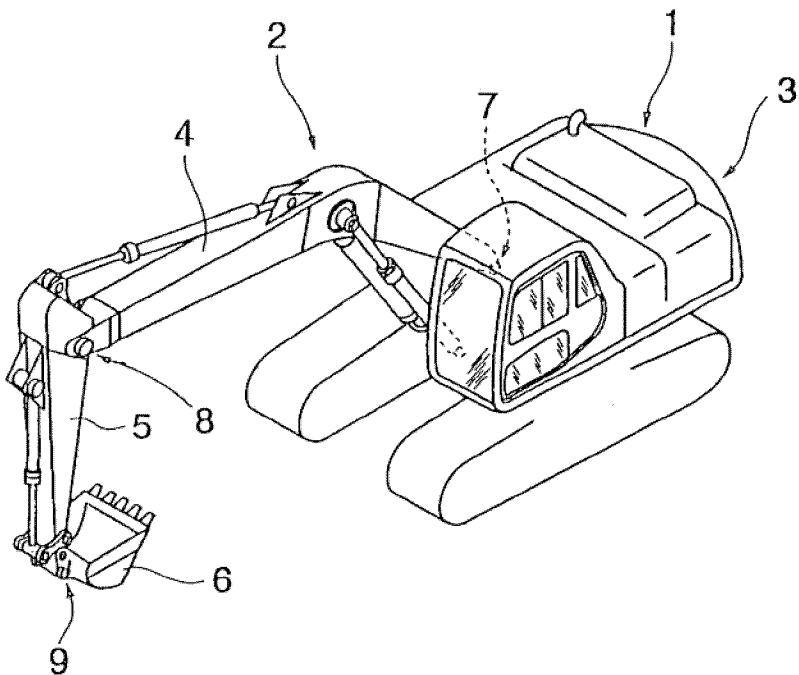
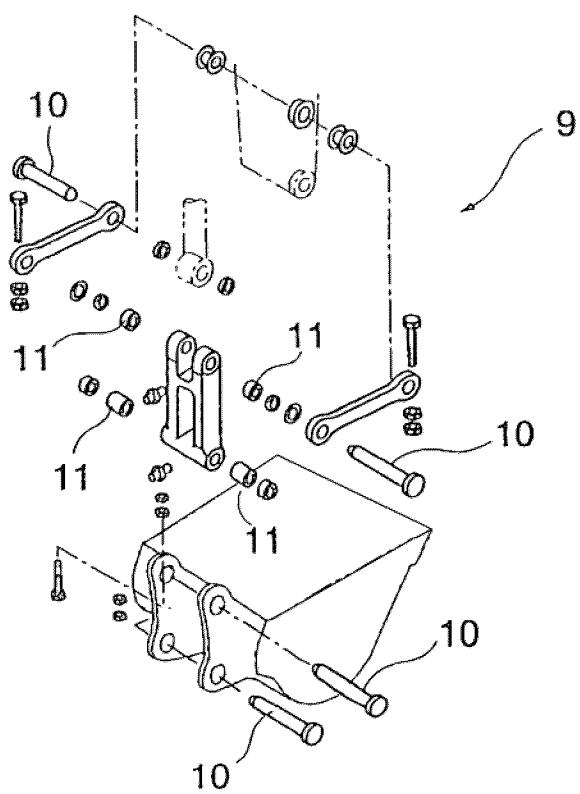
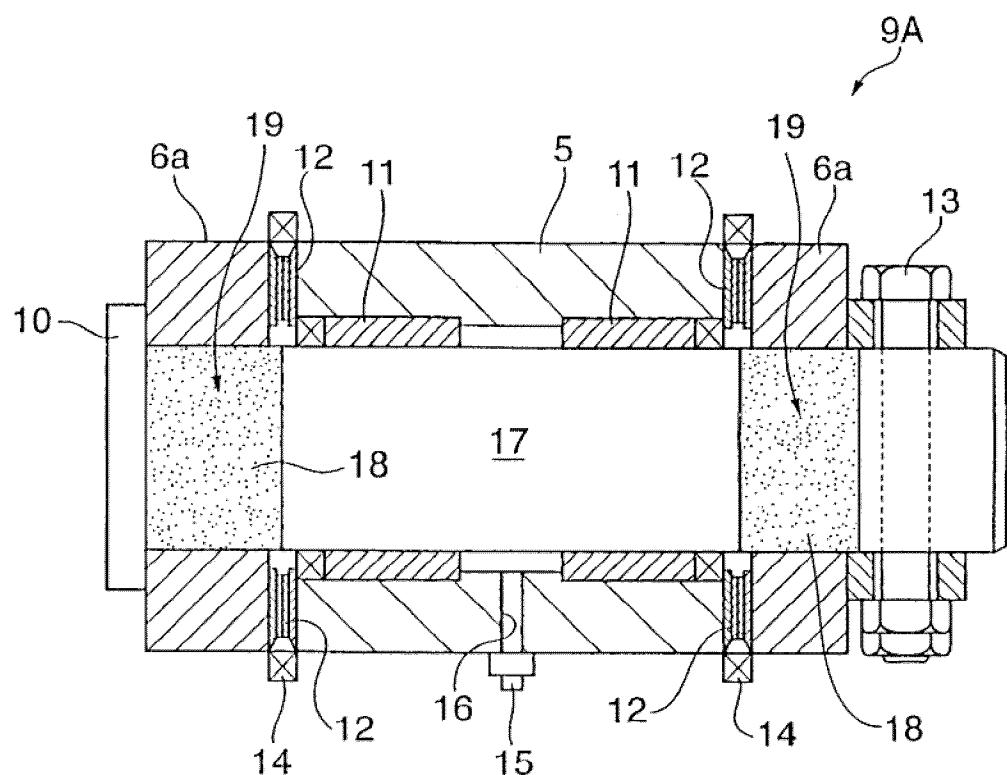


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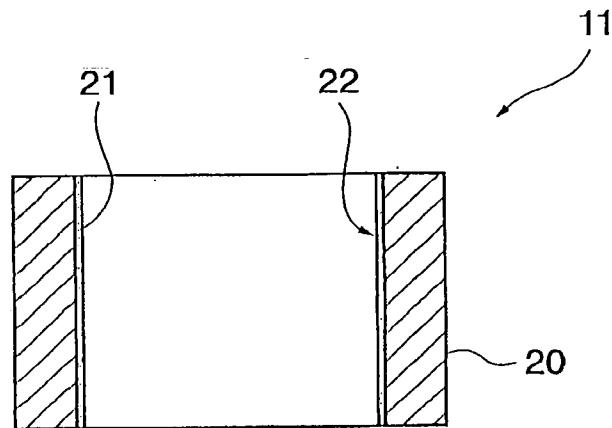
**FIG. 1A****FIG. 1B**

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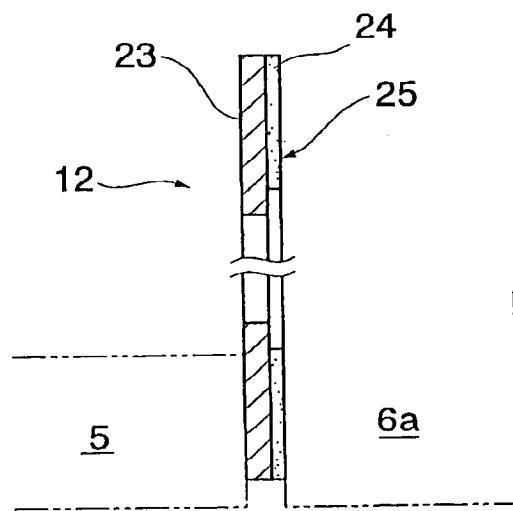
***FIG. 2***

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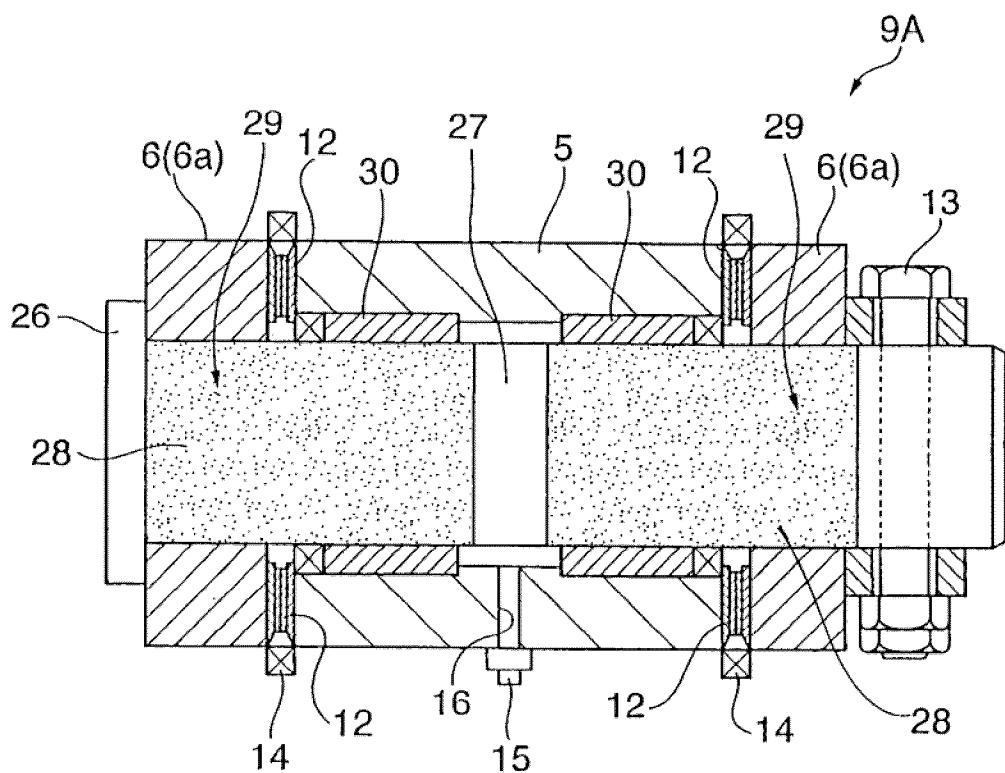
***FIG. 3A***



***FIG. 3B***

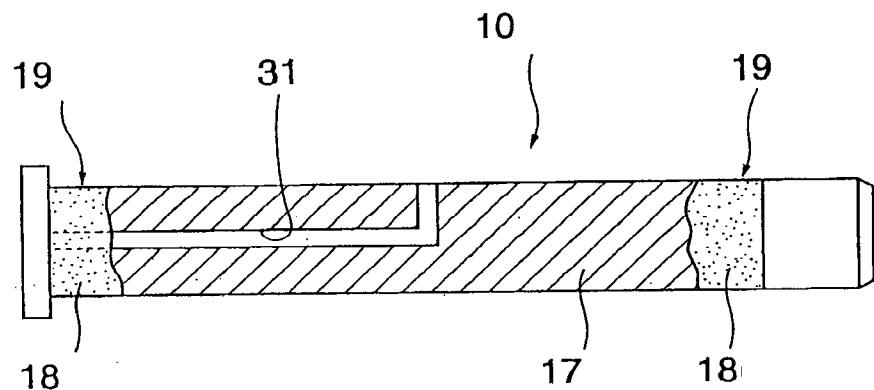


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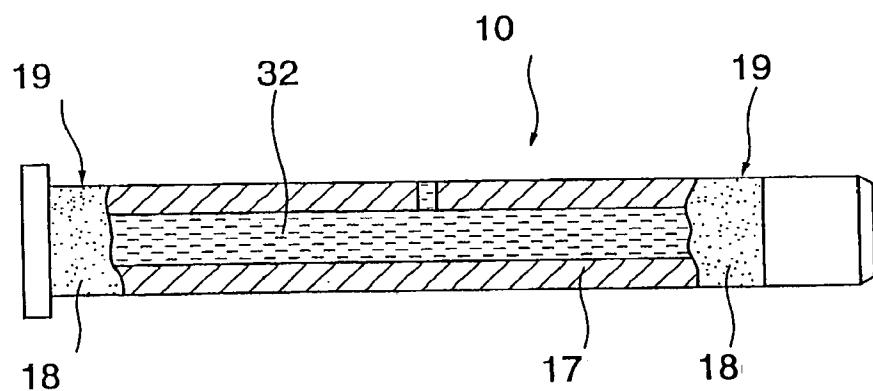
**FIG. 4**

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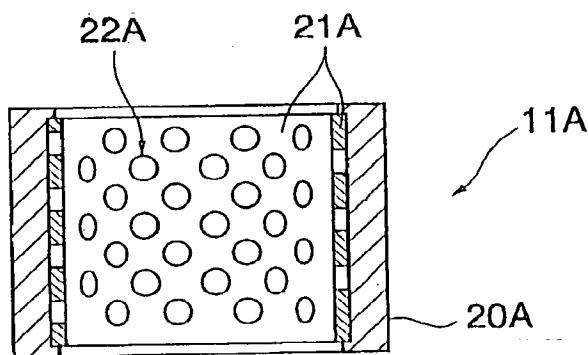
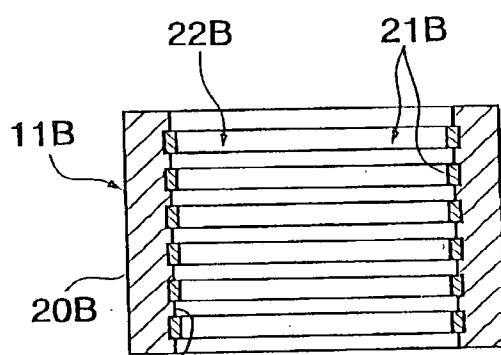
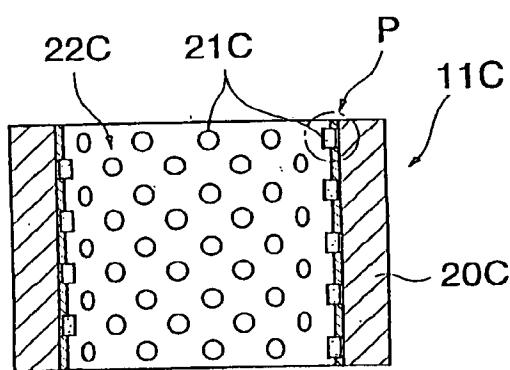
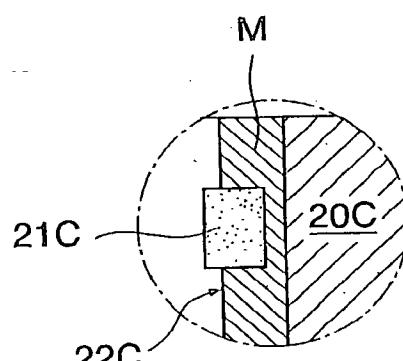
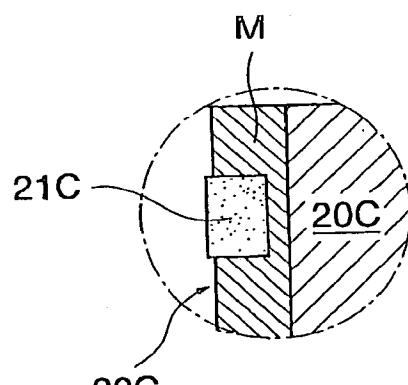
***FIG. 5A***



***FIG. 5B***



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*FIG. 6A**FIG. 6B**FIG. 6C**FIG. 6D**FIG. 6D'*

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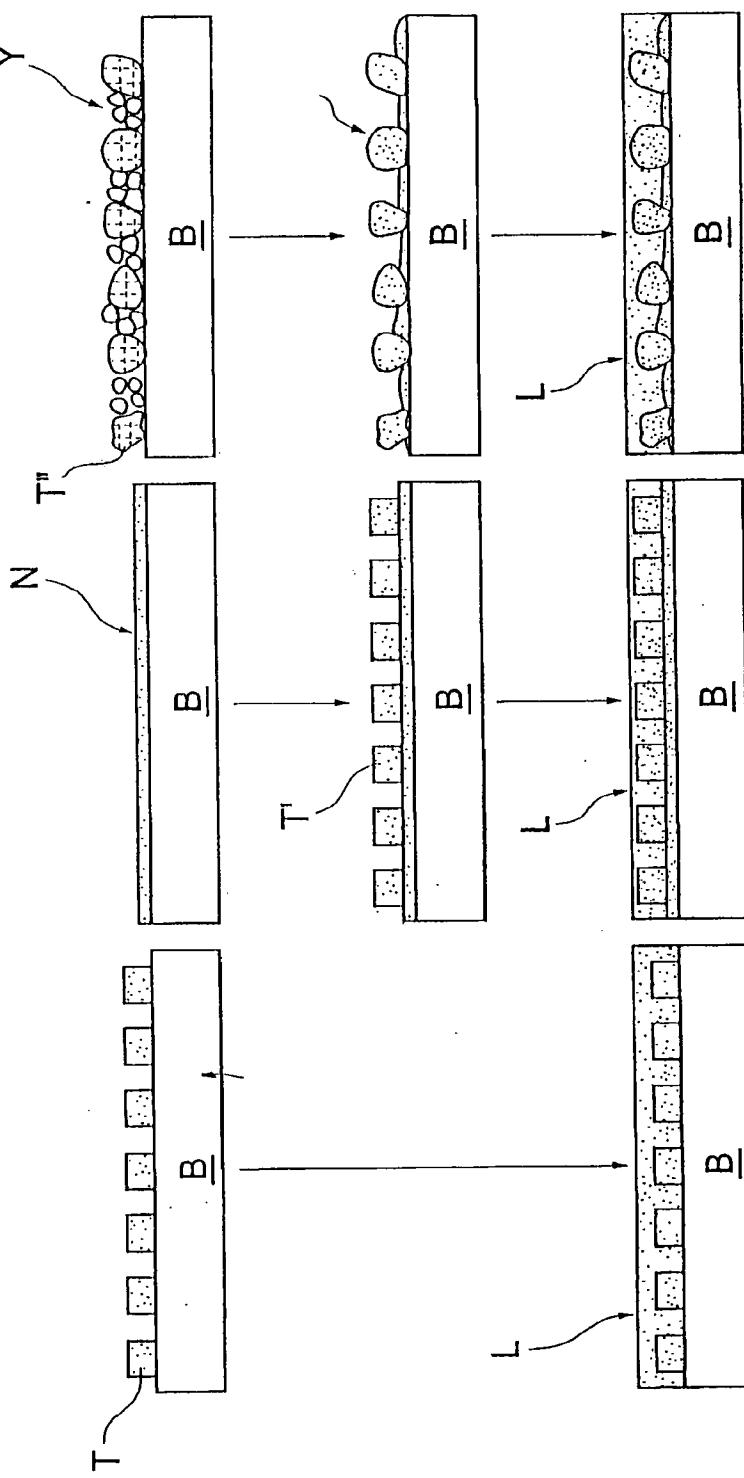


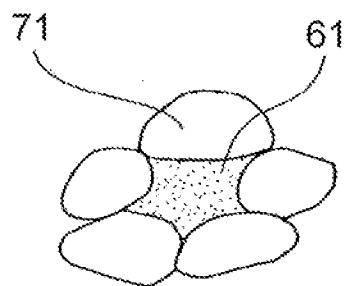
FIG. 7A

FIG. 7B

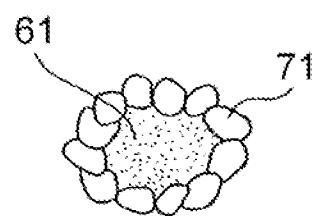
FIG. 7C

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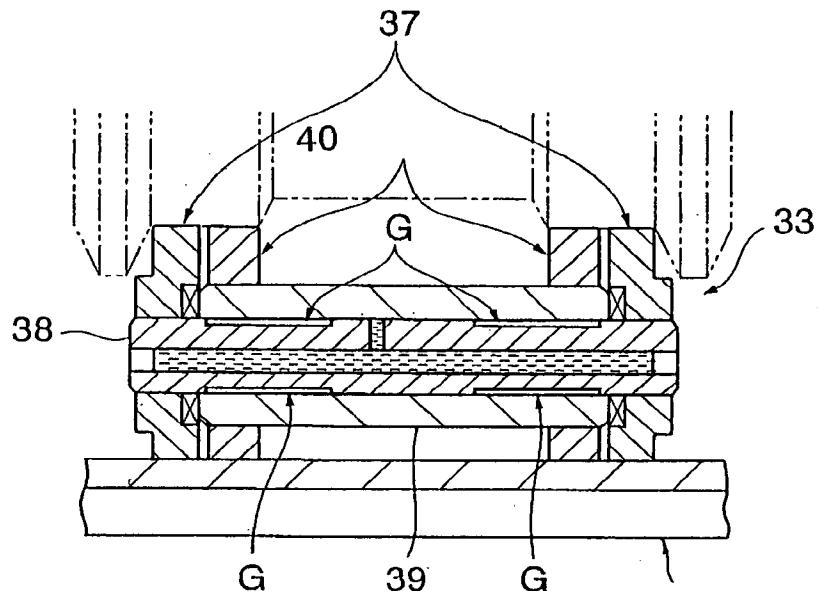
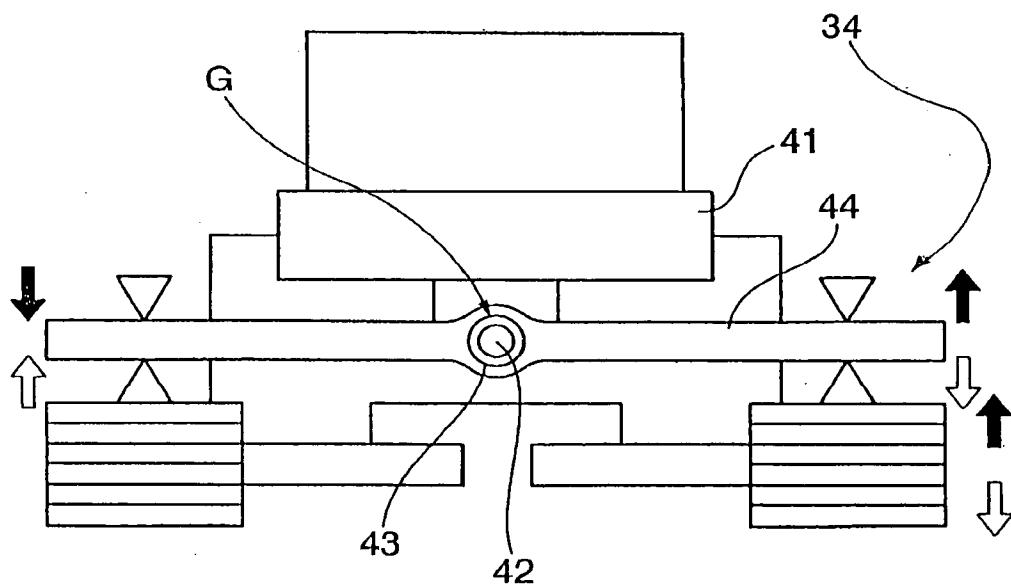
***FIG. 8A***



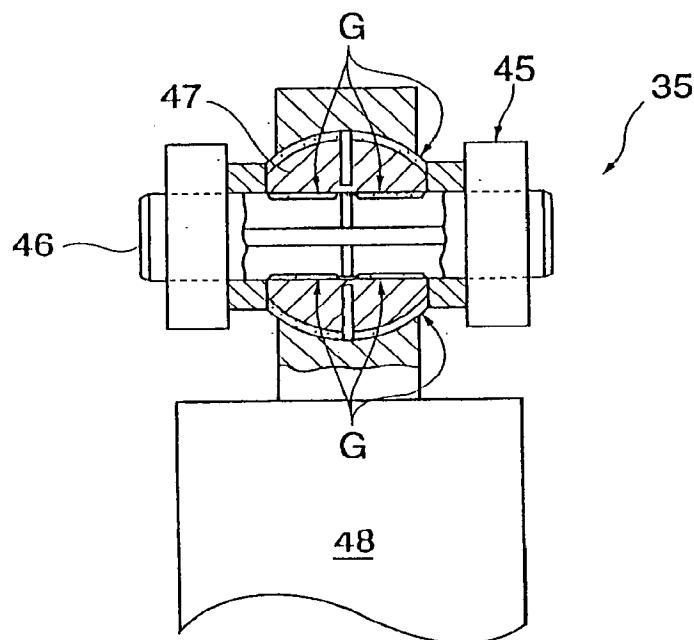
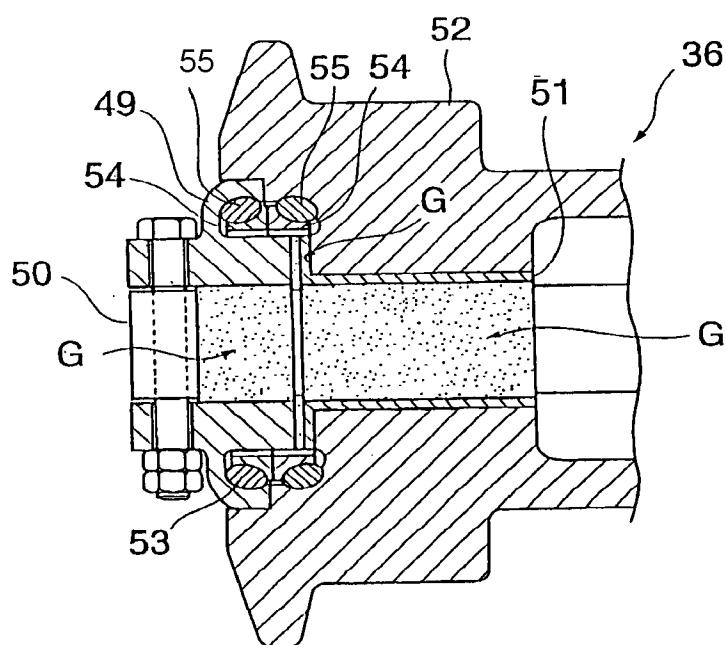
***FIG. 8B***



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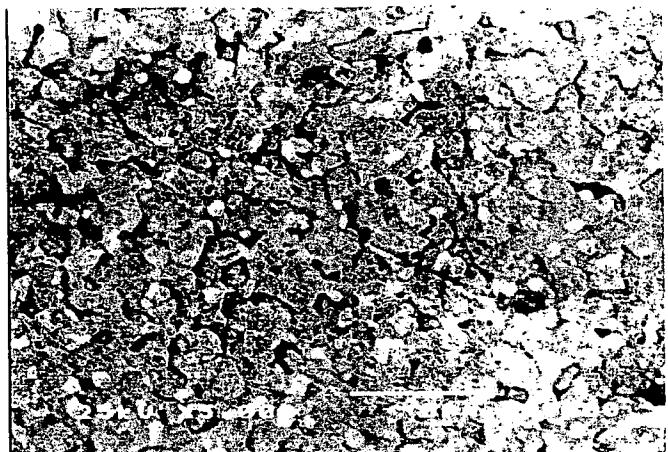
**FIG. 9A****FIG. 9B**

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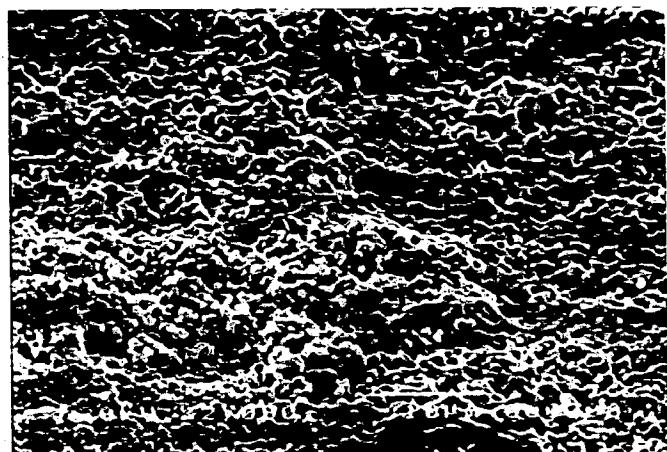
***FIG. 10A******FIG. 10B***

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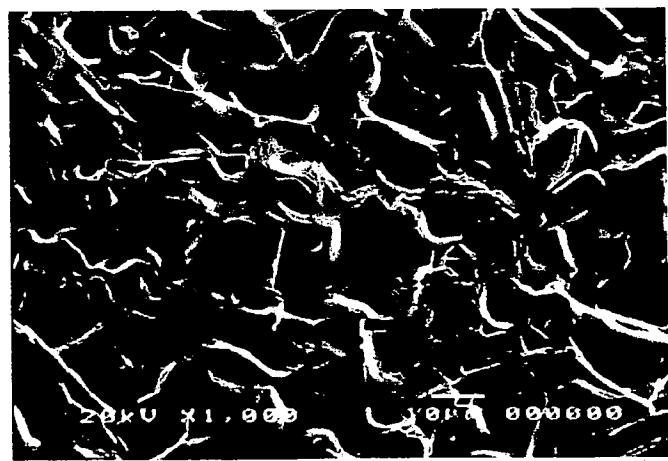
**FIG. 11A**



**FIG. 11B**

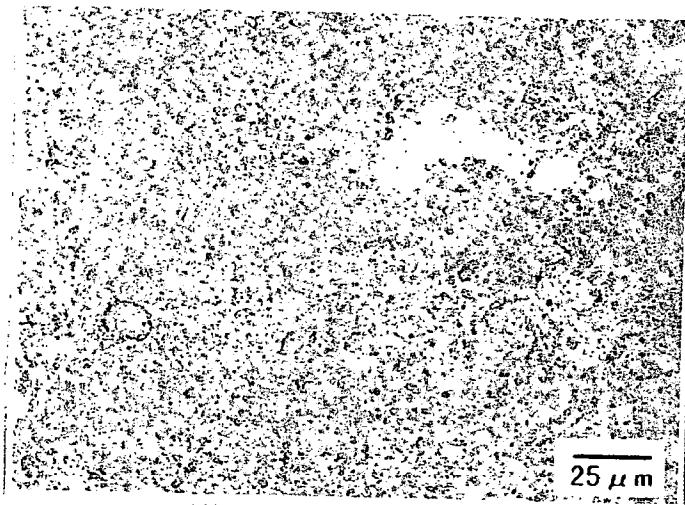


**FIG. 11C**



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***FIG. 12A***



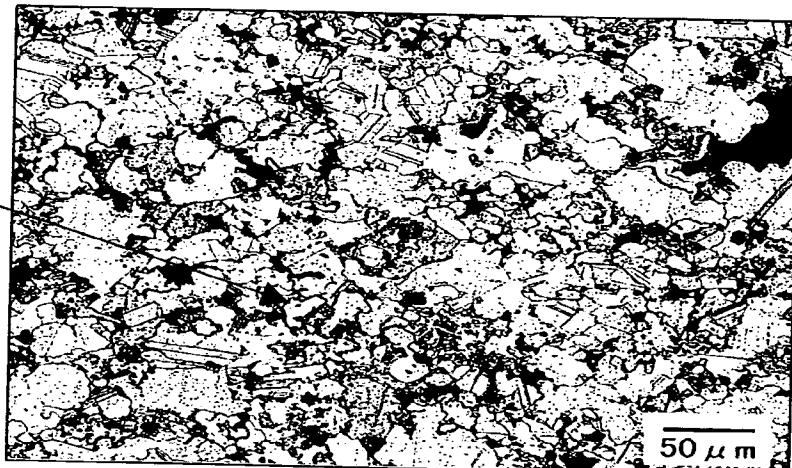
***FIG. 12B***



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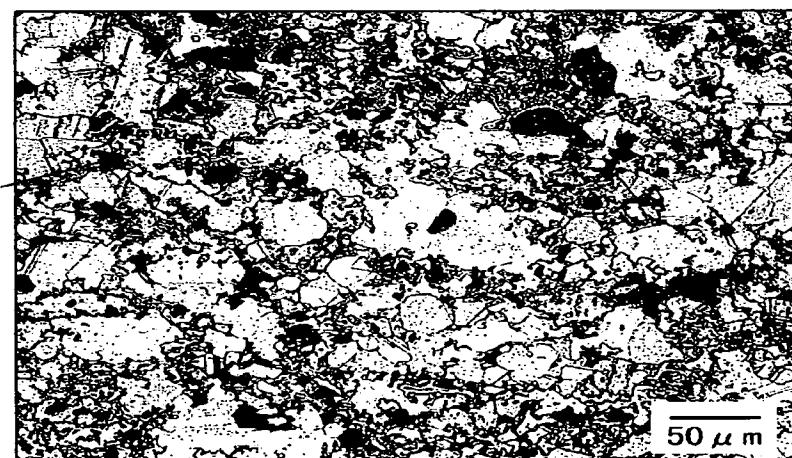
*FIG. 13A*

Hv120



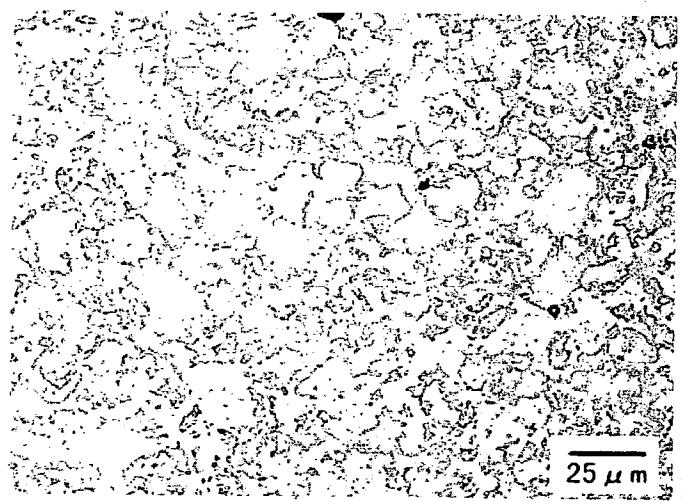
*FIG. 13B*

Hv145

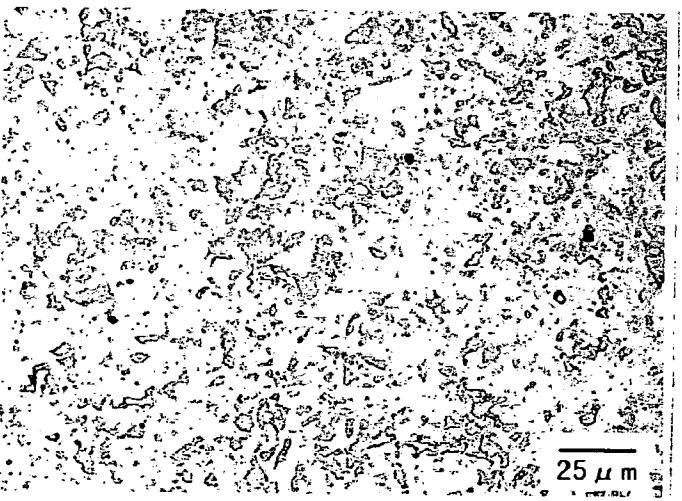


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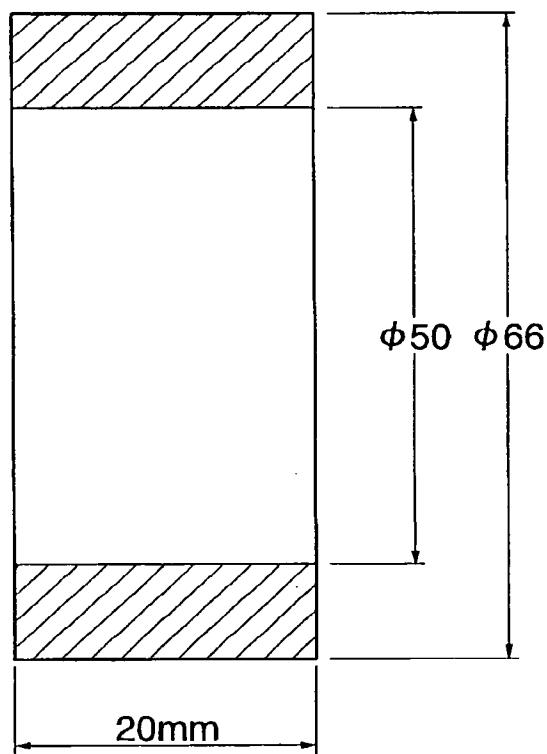
***FIG. 14A***



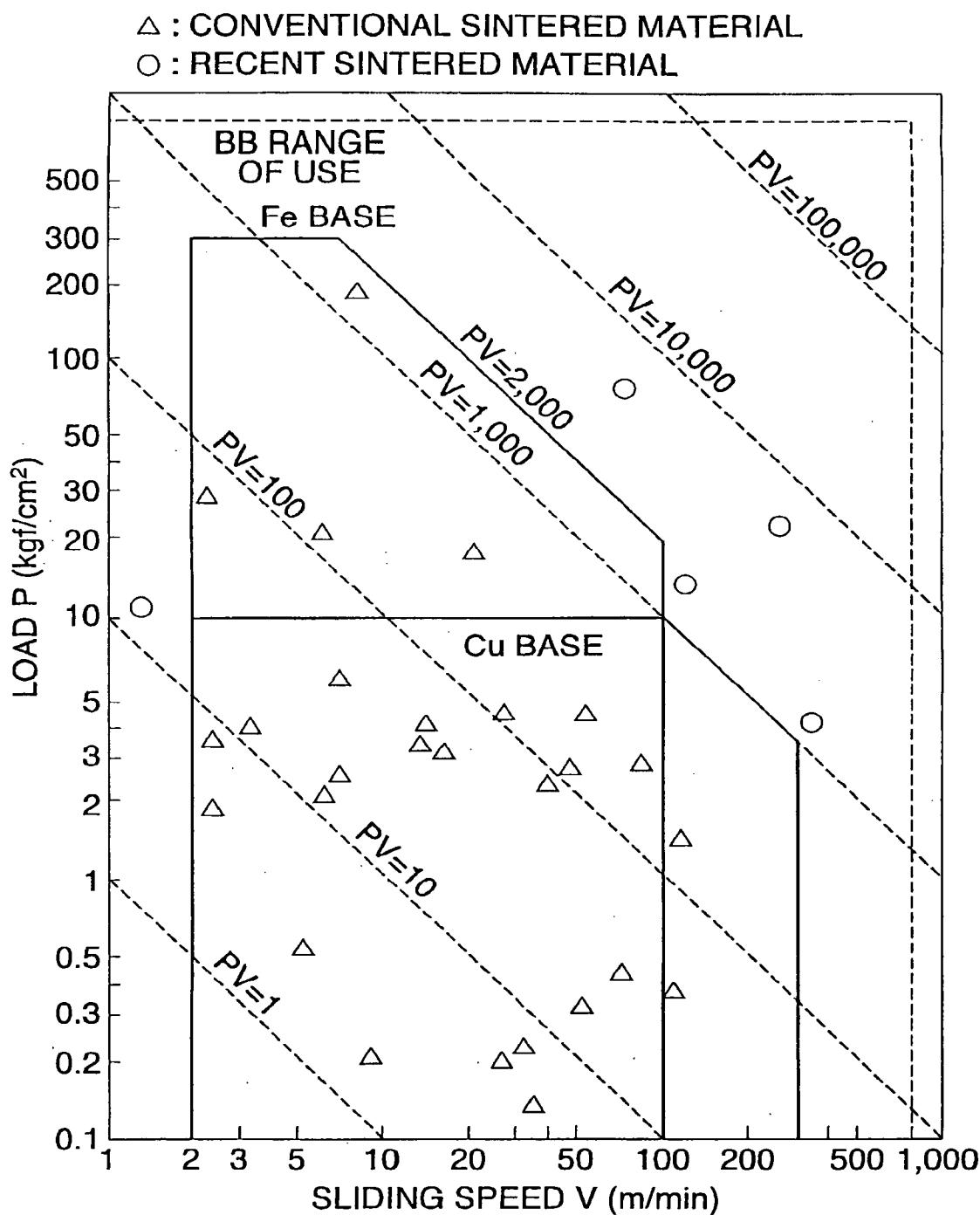
***FIG. 14B***



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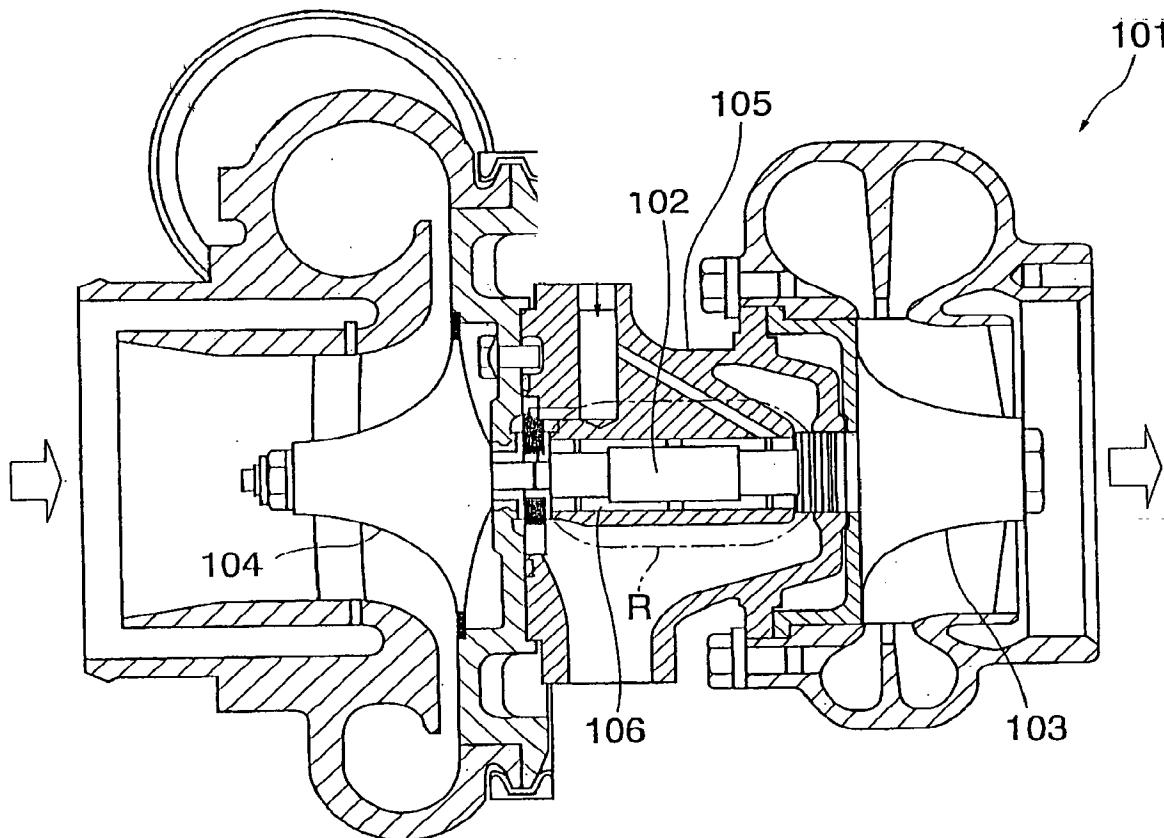
***FIG. 15***

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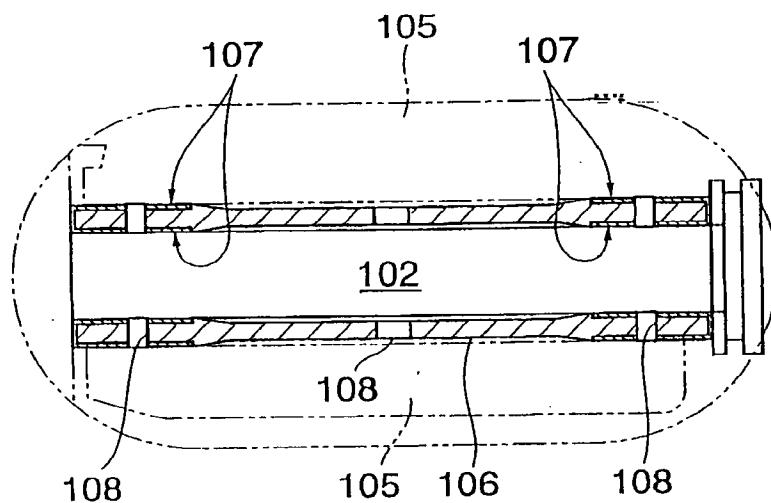
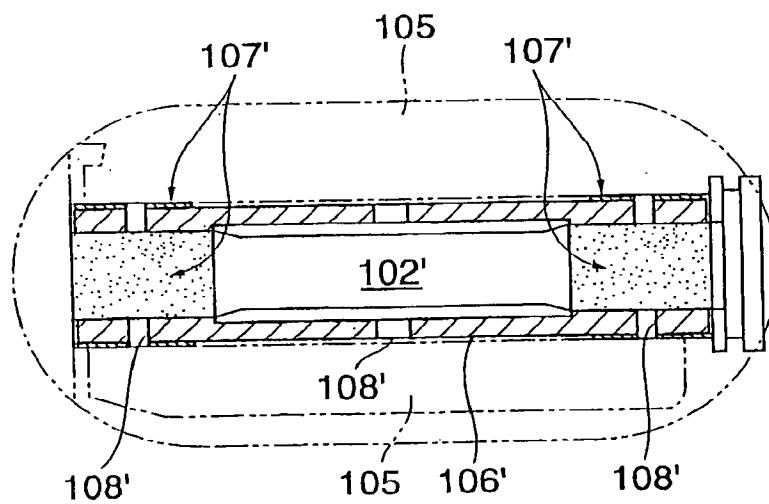
**FIG. 16**

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*FIG. 17*

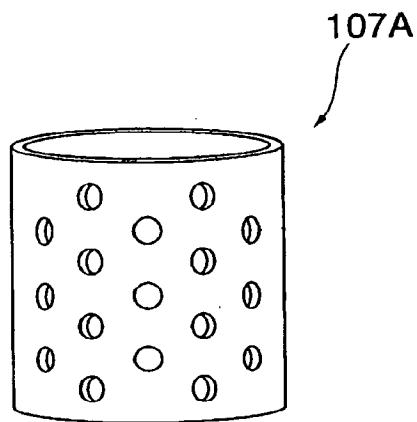


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***FIG. 18A******FIG. 18B***

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***FIG. 19A***



***FIG. 19B***

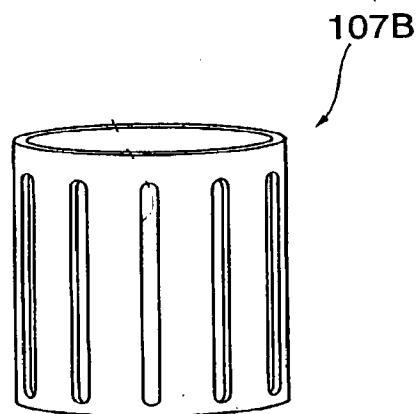
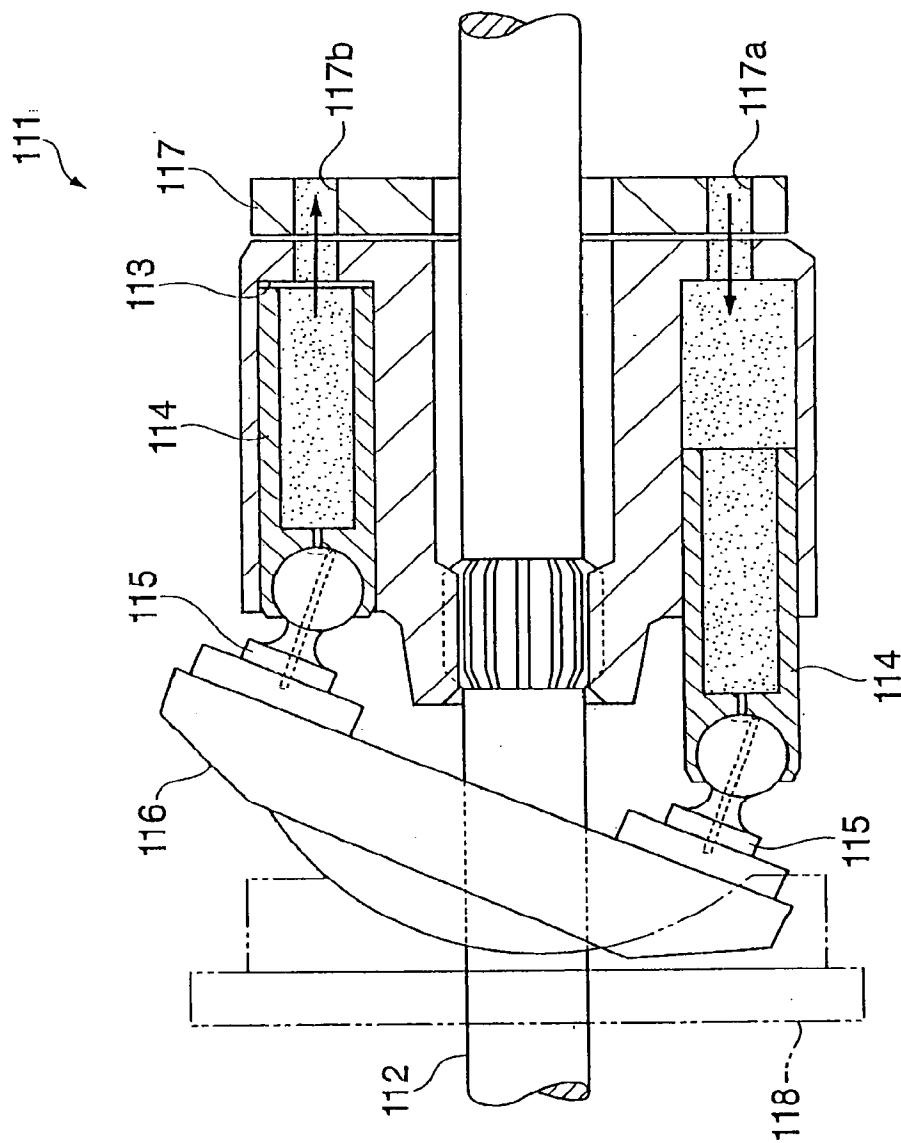


FIG. 20



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FIG. 21A

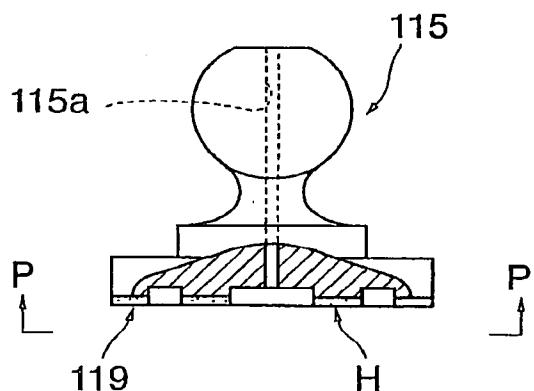


FIG. 21B

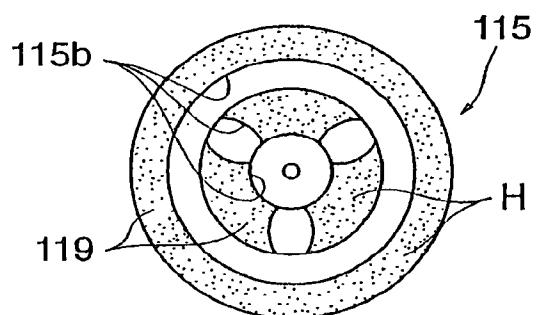
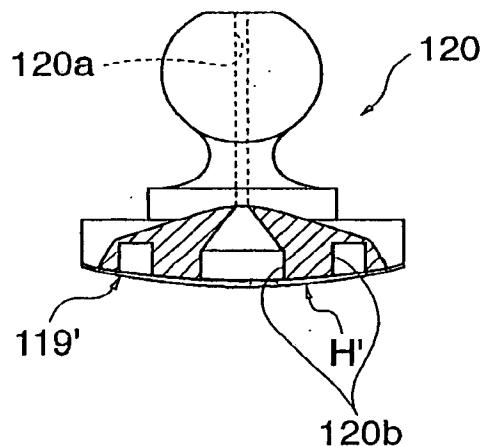
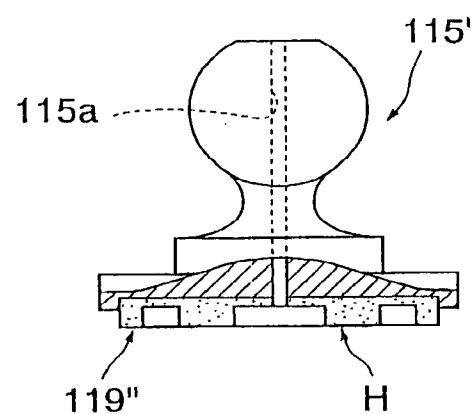
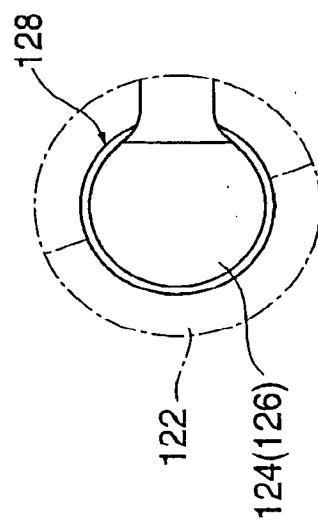
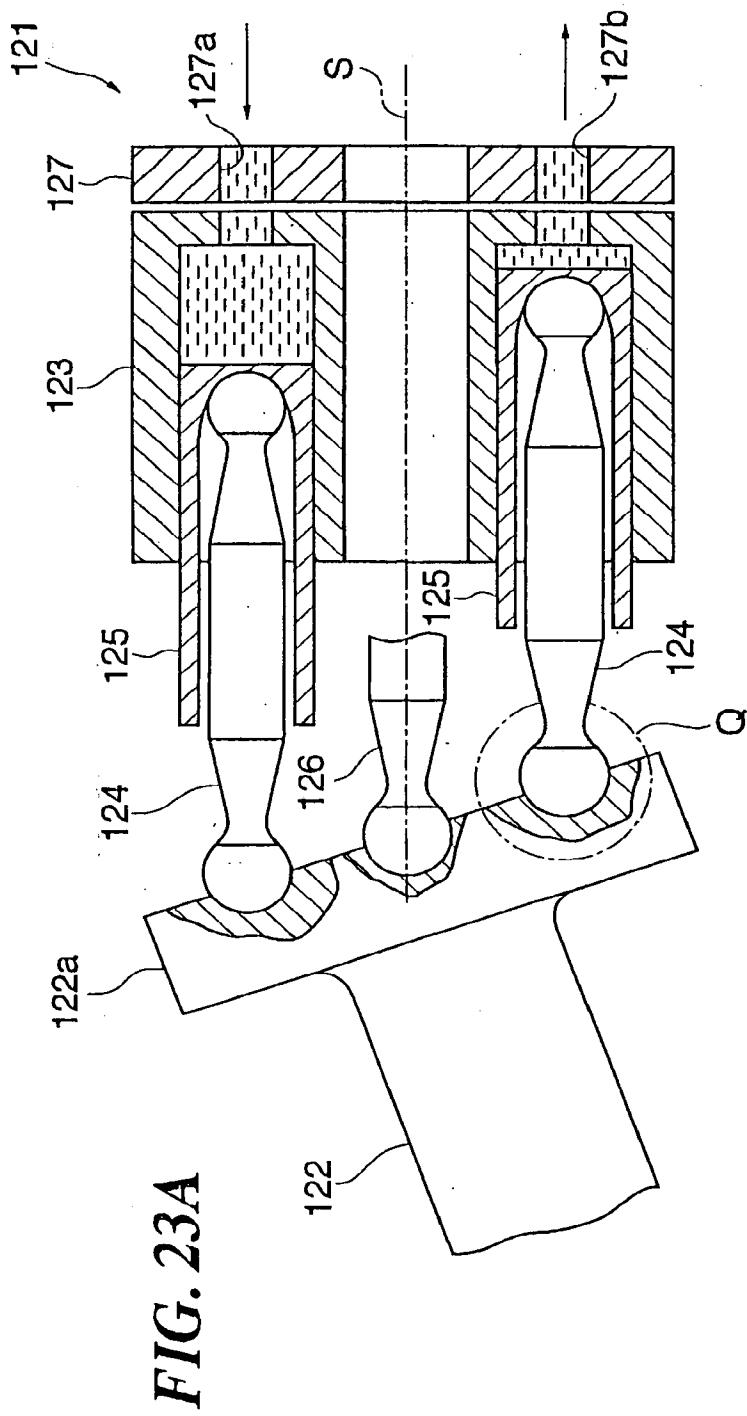


FIG. 21C



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*FIG. 22*

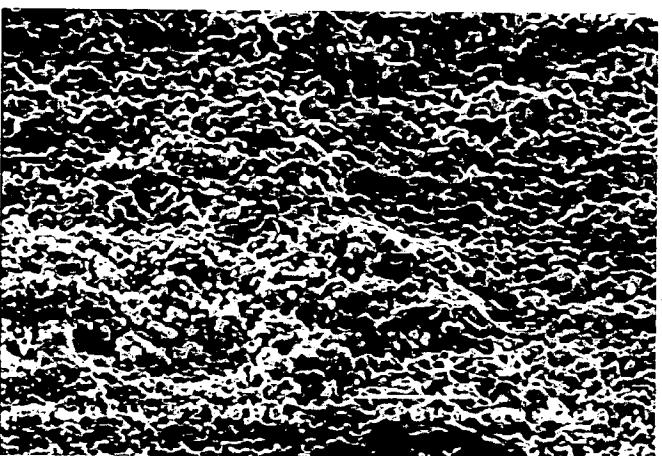


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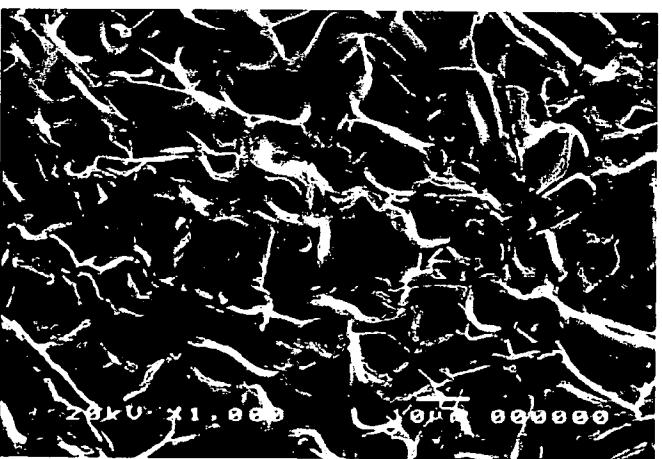
*FIG. 24A*



*FIG. 24B*

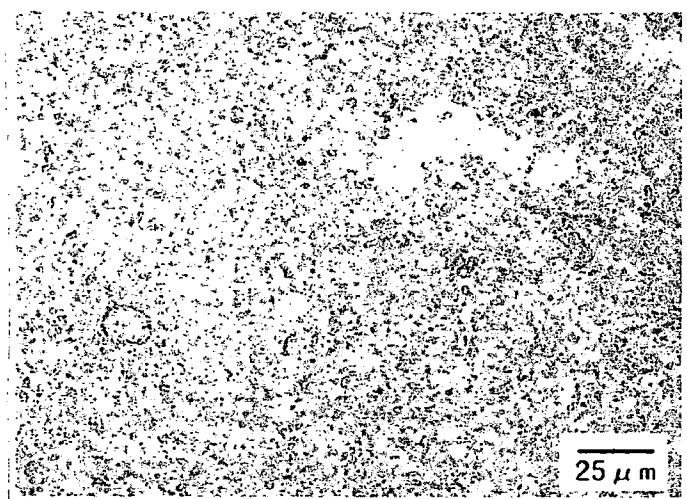


*FIG. 24C*

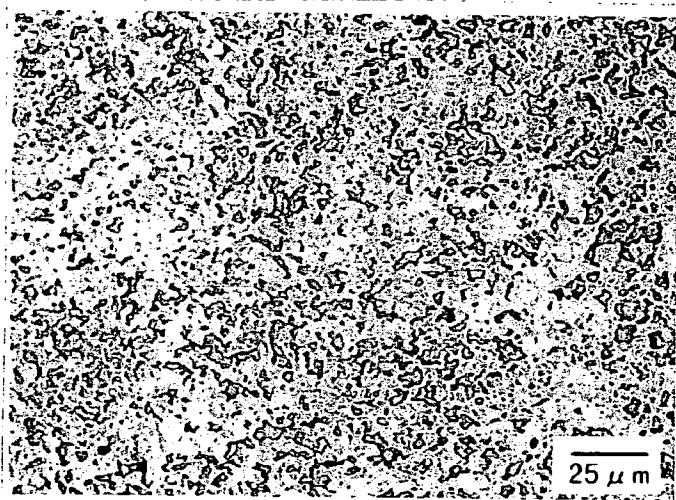


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***FIG. 25A***

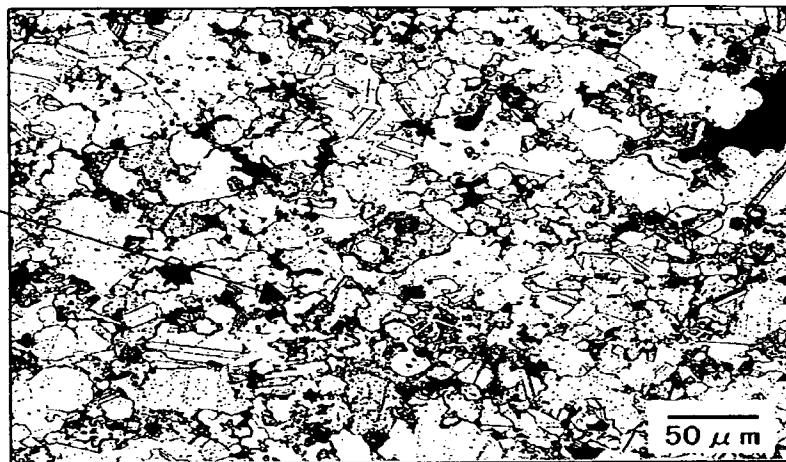


***FIG. 25B***

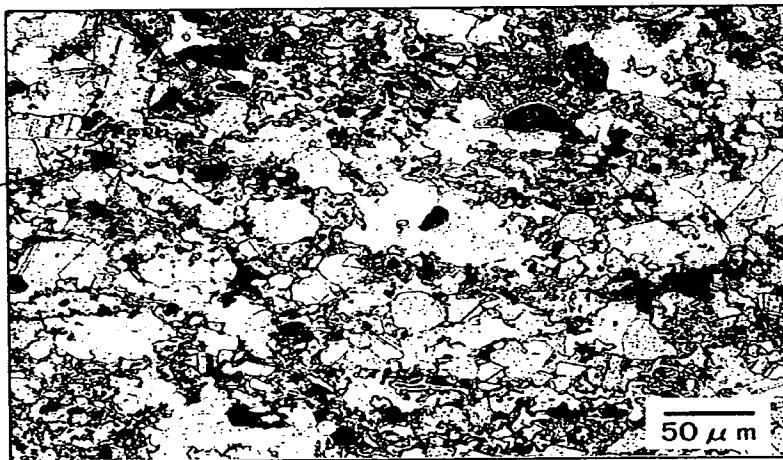


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***FIG. 26A***



***FIG. 26B***



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FIG. 27A

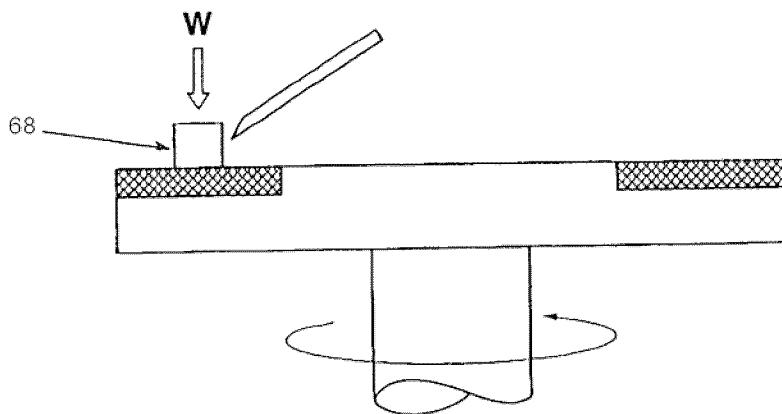


FIG. 27B

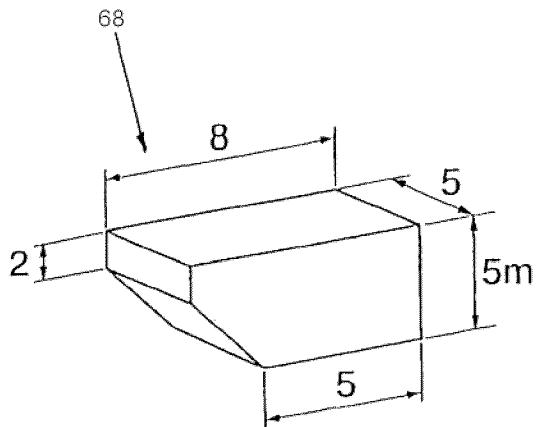
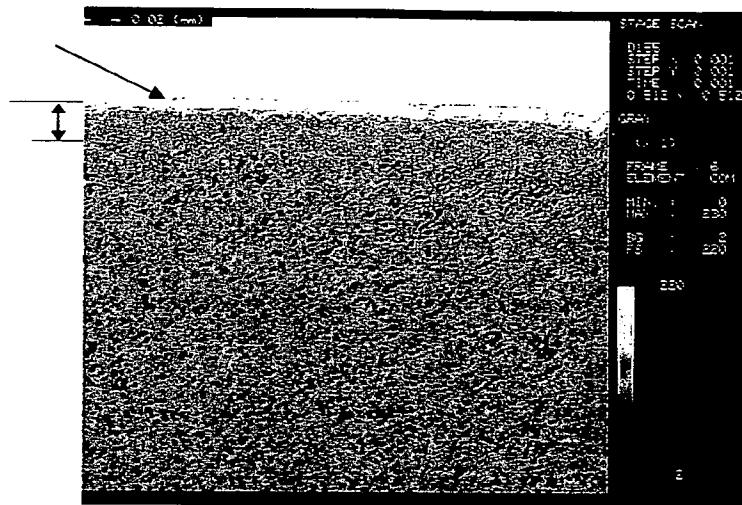
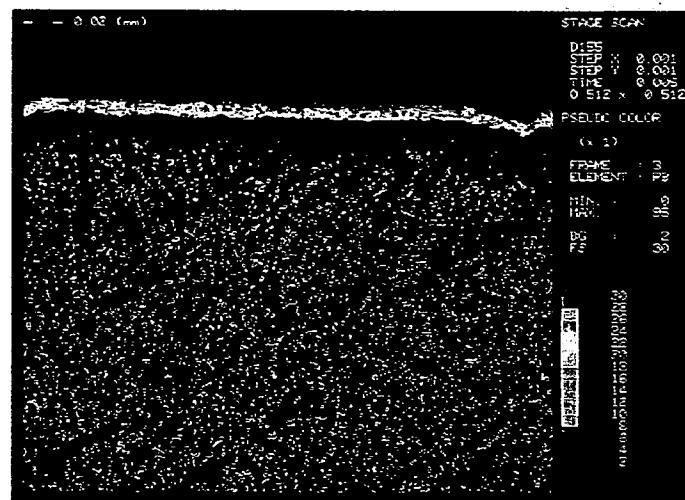


FIG. 27C

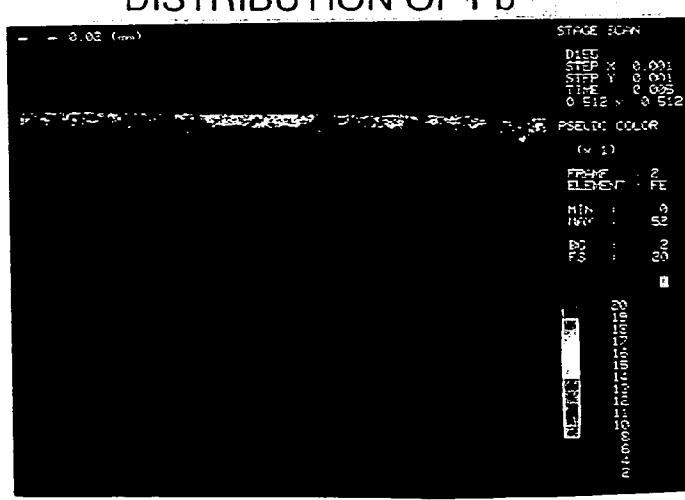
CONDITION  
REFERENCE : CARBURIZED AND QUENCHED SCM420  
SURFACE HARDNESS: HRC60~62  
SURFACE ROUGHNESS: UNDER 3S  
LUBRICATING OIL: #E10  
AMOUNT: 5cm<sup>3</sup>/min(DROP)  
TEMPERATURE: 60°C  
SLIDING SPEED: 10m/sec  
BEARING STRESS: Max800kgf/cm<sup>2</sup>



**FIG. 28A**

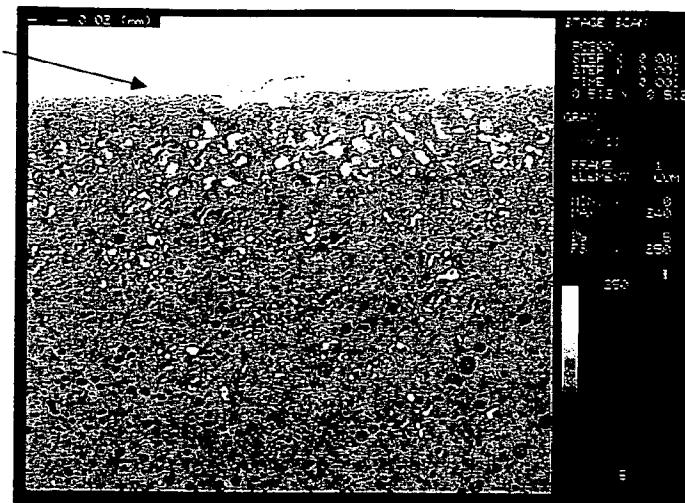


**FIG. 28B**



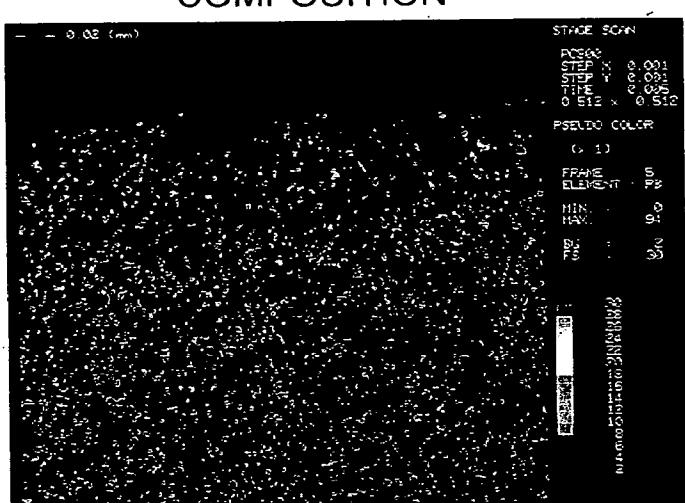
**FIG. 28C**

*FIG. 29A*



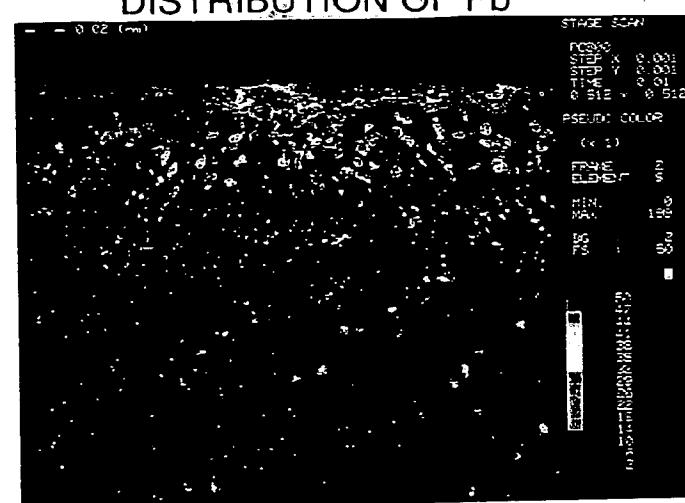
## COMPOSITION

**FIG. 29B**



## DISTRIBUTION OF Pb

FIG. 29C



## DISTRIBUTION OF S